

CS 315-01 Project 06 Data Mem Sizes

Lab 06

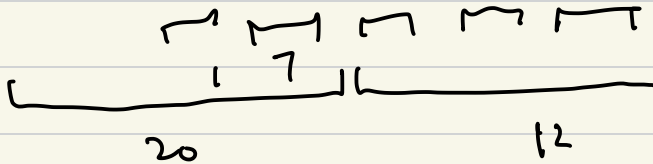
Branches

Data Memory

Tests

```
lui a0, 0x17
```

```
addiw a0, a0, 0x16fa5  
      uuuu
```

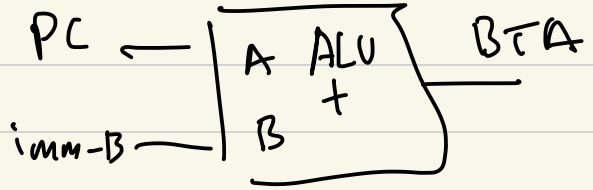


Branches

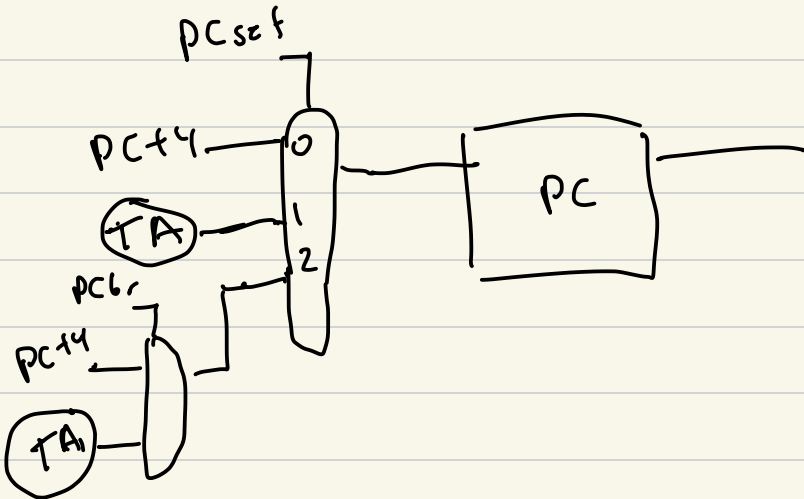
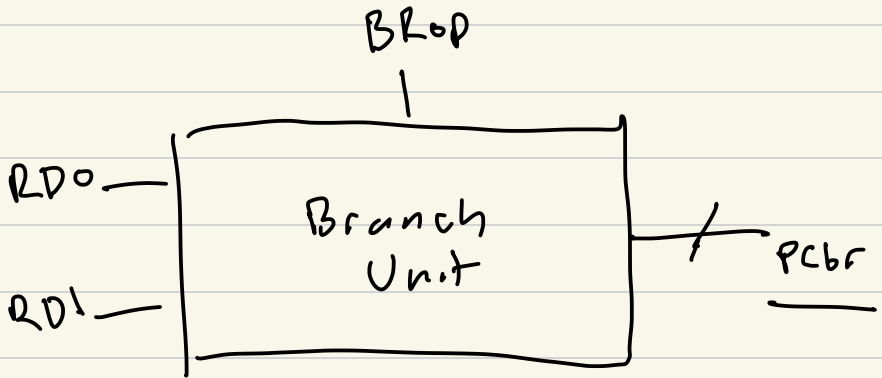
- 1) calculate BTA (branch target addr)
- 2) Determine if we take branch

BTA

beg to, tl, label



Determine if we take branch



Data Memory

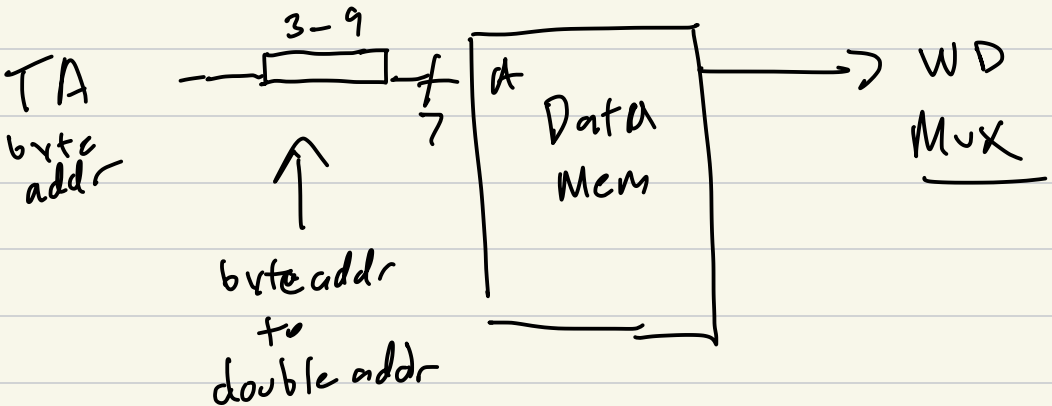
ld
sd

Load

ld to, 0(tl)
└──┬──┘
rd TA

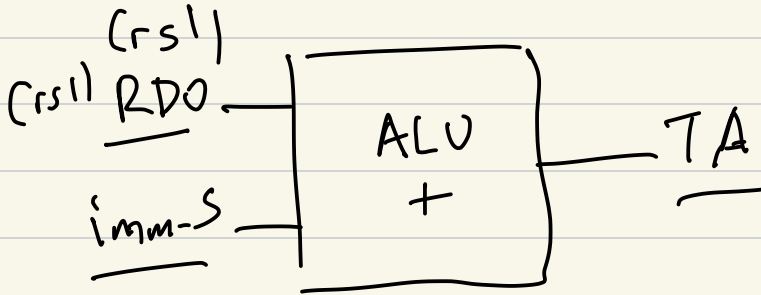
rd = ~~TA~~

WR = to

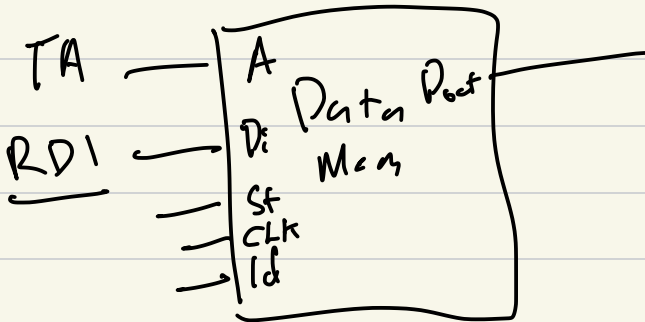


Store

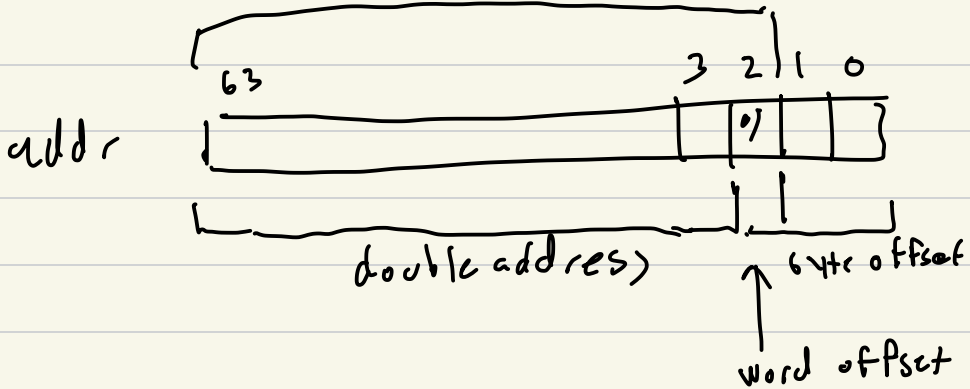
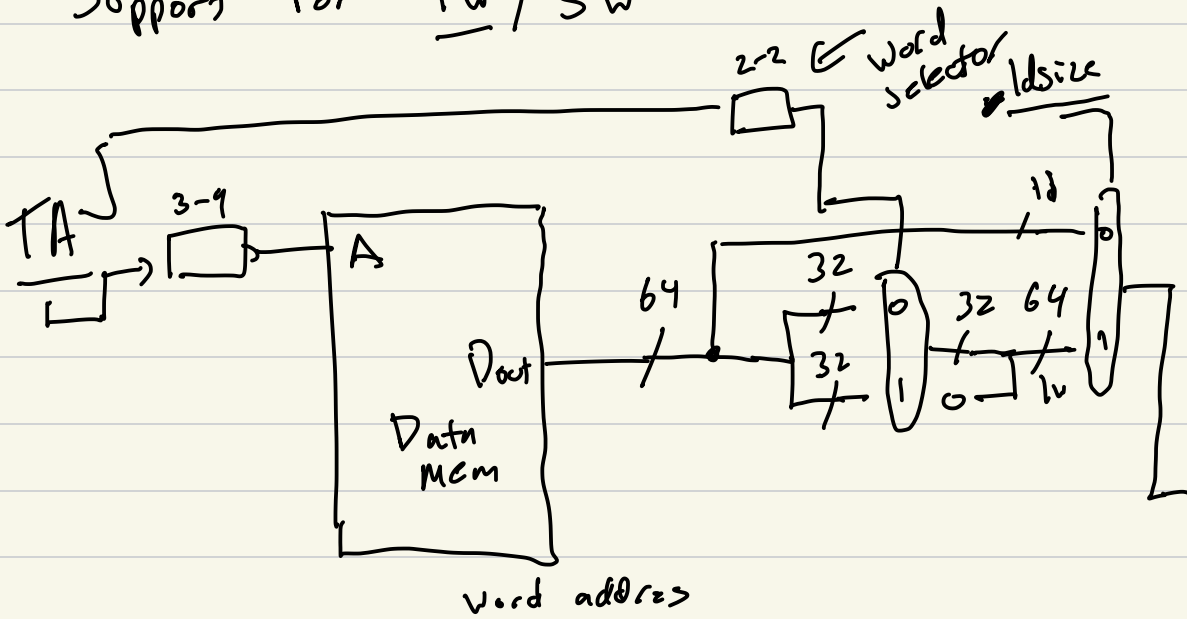
$$sd \frac{rd}{t_0}, \underline{O(t_1)}$$

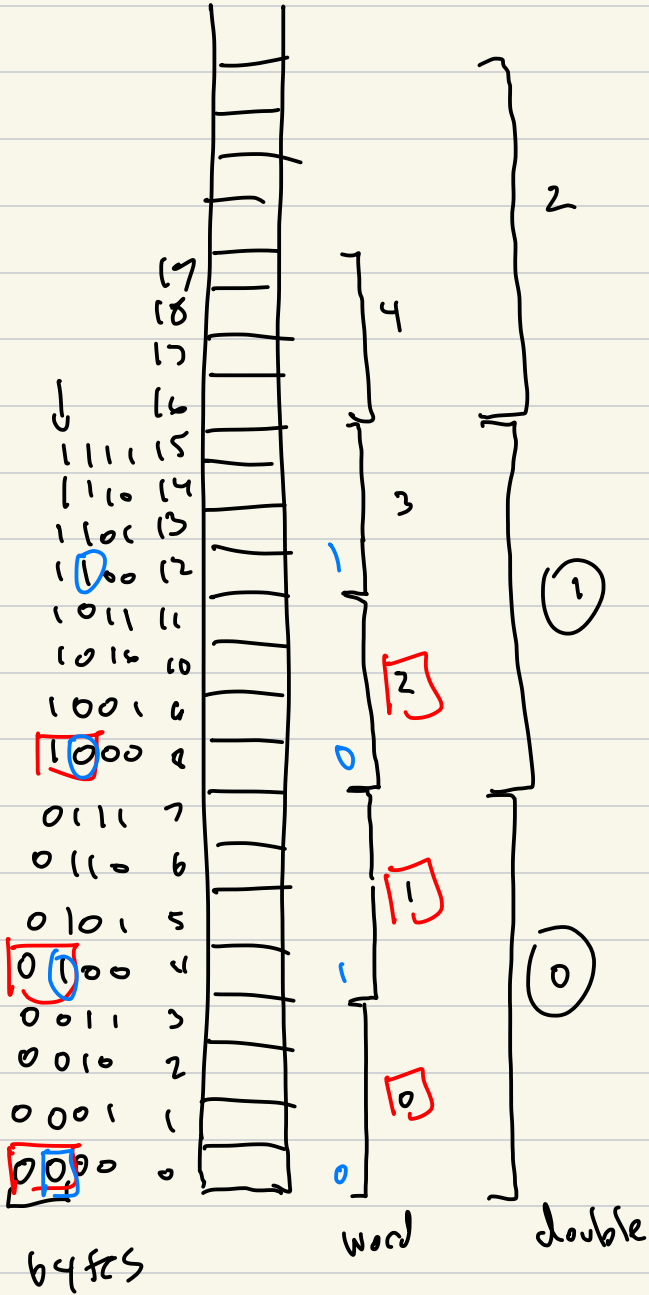


r52 → r01 → Data Memory



Support for lw / sw

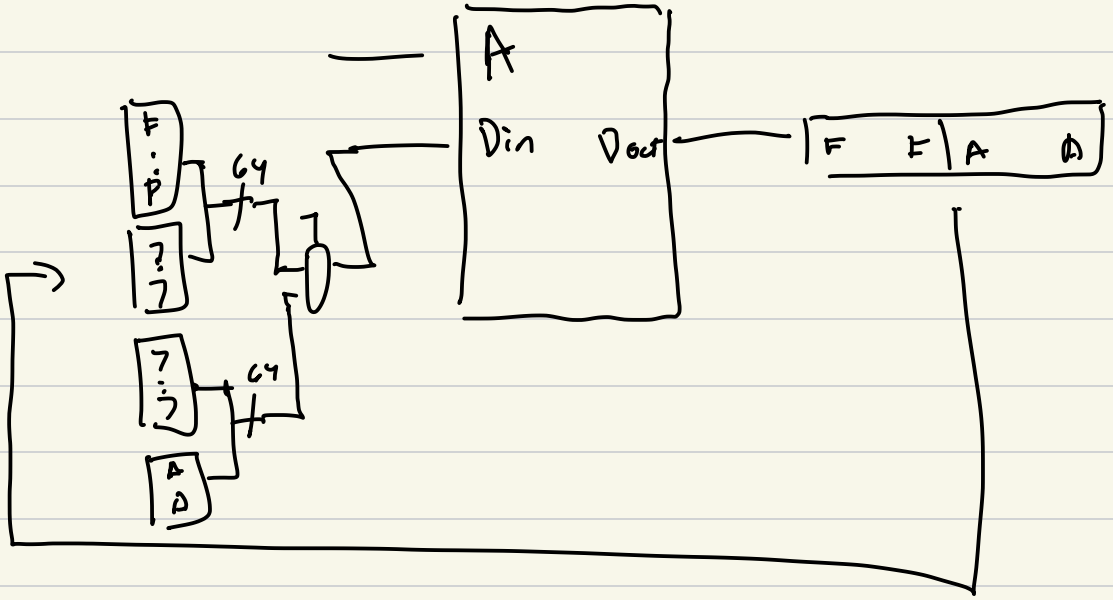




SW to, o(tl)

$$\text{mem}[0(tl)] = 0 \times \overbrace{\text{FFFFFFF}}^{32} \overbrace{\text{AAAAAAA}}^{32}$$

$$60 = 0 \times \text{77777777}$$



① 0x FFFF FFFF 7777 7777

RN W

read modify write.

② 0x 7777 7777 AAAAAA